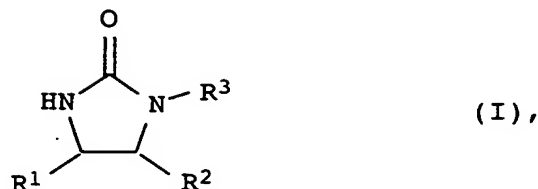


We claim:

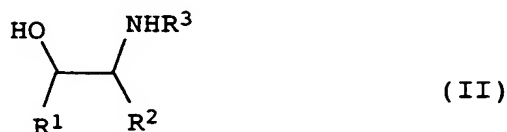
1. A process for preparing chiral imidazolidin-2-ones of the  
5 general formula I



in which

- 15 R<sup>1</sup> is C<sub>1</sub>-C<sub>8</sub>-alkyl, cyclohexyl, phenyl, a C<sub>1</sub>-C<sub>6</sub>-alkyl-, halo-,  
nitro-, C<sub>1</sub>-C<sub>6</sub>-alkoxy-, C<sub>1</sub>-C<sub>6</sub>-alkylmercapto- or  
CF<sub>3</sub>-substituted phenyl radical, naphthyl or a  
C<sub>1</sub>-C<sub>6</sub>-alkyl-, halo-, nitro-, C<sub>1</sub>-C<sub>6</sub>-alkoxy- or  
CF<sub>3</sub>-substituted naphthyl radical,  
20 R<sup>2</sup> is C<sub>1</sub>-C<sub>8</sub>-alkyl, C<sub>2</sub>-C<sub>8</sub>-alkenyl, cyclohexyl, phenyl or a  
phenyl-C<sub>1</sub>-C<sub>6</sub>-alkyl radical which may be substituted by a  
nitro, C<sub>1</sub>-C<sub>6</sub>-alkoxy, methylenedioxy or CF<sub>3</sub> radical, and  
R<sup>3</sup> is C<sub>1</sub>-C<sub>12</sub>-alkyl, C<sub>2</sub>-C<sub>8</sub>-alkenyl, cyclohexyl, phenyl or a  
C<sub>1</sub>-C<sub>6</sub>-alkyl-, halo-, nitro-, C<sub>1</sub>-C<sub>6</sub>-alkoxy-,  
methylenedioxy-, dialkylamino- or CF<sub>3</sub>-substituted phenyl  
radical,

25 by reacting a compound of the formula II or the salt thereof



in which R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup> have the abovementioned meaning,

- 35 with urea in the presence of an ammonium salt, wherein the  
reaction is carried out in the presence of a polar organic  
solvent and the reaction takes place in solution at  
temperatures of from 170 to 190°C.
- 40 2. A process as claimed in claim 1, wherein an aprotic solvent  
is used.

45

3. A process as claimed in either of claims 1 or 2, wherein N-methylpyrrolidone is employed as organic solvent.
4. A process as claimed in any of claims 1 to 3, wherein R<sup>1</sup> is phenyl and R<sup>2</sup> and R<sup>3</sup> are methyl.
5. A process as claimed in any of claims 1 to 4, wherein the reaction is carried out in the presence of proton donors, wherein an acid with a pKa of  $\leq 3$  is used as proton donor.
6. A process as claimed in any of claims 1 to 5, wherein para-toluenesulfonic acid is employed as proton donor.
7. A process as claimed in any of claims 1 to 6, wherein sulfamic acid is employed as proton donor.
8. A process as claimed in any of claims 1 to 7, wherein the proton donor is employed in amounts of from 0.05 to 0.6 equivalent based on the compound of the formula II.
9. A process as claimed in any of claims 1 to 8, wherein (1S,2R)-ephedrine or a salt thereof is employed as compound of the formula II.
10. A process as claimed in any of claims 1 to 9, wherein (1R,2S)-ephedrine or a salt thereof is employed as compound of the formula II.